EXHIBIT A
Upper Russian River Exotic Invasives Removal Project
SCOPE OF WORK

Under direction of the Grantor, and under the following conditions and terms, the Grantee will:

I Goals Statement

Improve spawning and rearing habitat by reducing fine sediment and improving riparian canopy for Chinook salmon and steelhead trout in a selected section of Parsons Creek and the Russian River in Mendocino County.

II Objectives Statement

The objective is to eradicate *Arundo donax* and Tamarisk from approximately 29.67 mixed infestation acres of riparian forest along approximately 2.88 miles of stream at three sites. An additional objective is to plant approximately 200 native willow sprigs to immediately reduce bank erosion and eventually increase riparian canopy.

III Location Description

Conduct work on Parsons Creek from its confluence with the Russian River to the East Side Road bridge, and the Main stem Russian River at the King Ranch, Largo Ranch and Beckstoffer Vineyards. The project is located in Sections 18 and 19 of Township 13 North Range 11 West and Sections 25 and 36 of Township 14 North Range 12 West and Section 33 of Township 15 North Range 12 West, Mount Diablo base and meridian, of the Hopland and Elledge Peak 7.5 Minute U.S.G.S. Quadrangles, 123.125º west, 39.125º north and 123.125º west, 38.875º north as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

IV Quantitative Description

The first season of work will be focused on removal of approximately 29.67 acres of Arundo and Tamarisk on specifically identified properties along approximately 2.88 miles of the Mainstem Upper Russian River and Parsons Creek. Stands of Arundo will be mowed initially by hand tools and small engine equipment. This initial mowing will stress the plant, allowing for a more effective follow-up herbicide treatment. All biomass will be mulched on-site to eliminate risk of reinfestation of Arundo downstream.

After initial removal and all subsequent work seasons of the project, Arundo and tamarisk will be re-treated. Following a suitable period of regrowth, the stressed Arundo will be sprayed with an imazapyr herbicide formulation appropriate for aquatic environments. Regrowth will typically be 2-4’ tall when sprayed. This methodology is preferred because it reduces the quantity of herbicide required and the need for applicators to spray at heights that may damage adjacent native vegetation.

Removal activities will also include hand removal by labor crews, so as to ensure careful and complete treatment of Arundo in areas not accessible to machinery or in areas where machinery

would impact native riparian trees and shrubs.

All areas treated will require follow-up herbicide treatment to complete Arundo control, and will be monitored for regrowth and treated with herbicide as needed throughout the term of the project.

Where appropriate to help stabilize eroding banks, approximately 200 willow sprigs will be planted.

Landowner outreach will be conducted to ensure that future control efforts can take place in strategic locations throughout the watershed. This task is vital for the ongoing removal of Arundo, as many landowners require long periods of relationship-building prior to allowing this program to take place on their lands. Outreach will consist of one-on-one landowner meetings, small community presentations, and localized landowner workshops where information on the Arundo removal program will be provided.

V Reporting Metrics

Annual Report

Annually no later than November 1 the Grantee shall submit to the Grantor's Contract Manager one (1) hard copy of a summary written report and one (1) digital, Adobe PDF or Microsoft Word compatible, copy on compact disc.

The Annual Report shall contain all metrics requested in the "All Reports" section listed below. The Annual Report shall contain the results of all work performed to date and address any comments submitted to the Grantee by the Grantor's Contract Manager.

Final Report

Upon completion of the project, the Grantee shall submit one (1) digital copy of a Draft Final Report not later than January 2, 2012 for review and comment. Within 30 days of receipt of the Draft Final Report, the Project Manager shall submit his final comments to the Grantee.

Upon completion of the project, but not later than February 28, 2012, the Grantee shall submit to the Grantor's Contract Manager three (3) hard copies of a final written report and three (3) digital, Adobe PDF or Microsoft Word compatible, copies on compact discs.

The Final Report shall contain all metrics requested in the "All Reports" section listed below. The Final Report shall address all Project Manager comments submitted to the Grantee during the review of the Draft Final Report. The Final Report shall contain the results of the work performed and address any comments submitted to the Grantee by the Grantor's Contract Manager.

The final report shall not be considered final until approved and accepted by the Contract Manager.

All Reports

The reports (annual and final) shall include, but not necessarily be limited to the following information:

-Grant number;
-Project name;
-Geographic area (e.g., watershed name);
-Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map;
-Geospatial reference/location (lat/long with datum is preferred – defined as point, line, or polygon);
-Project start and end dates and the number of person hours expended;
-Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service);
-Expected benefits to anadromous salmonids from the project;
-Labeled before and after photographs of any restoration activities and techniques;
-Specific project access using public and private roads and trails, with landowner name and address;
-Complete as built project description;
-Complete as-built plans and
-Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics

Habitat Projects (All)

-Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority, and list the specific priority task;
-Name the priority habitat limiting factors identified in that plan that are addressed by the project;
-Type of monitoring included in the project:
    -Design spec achieved
    -Fish movement/abundance
-Number of stream miles treated/affected by the project within the project boundaries.
-Overall stream length treated (miles, count one side of the stream only)
-Length of aquatic habitat disturbed (feet)
-Area (footprint) of instream features installed within the bankfull channel (square feet)

Riparian Habitat Projects (HR, HS)

-Number of miles treated (e.g., fenced) according to plan
-Number of acres treated (e.g., planted) according to plan
-Number of acres and type of invasive species controlled
-Species and size of trees planted
-Number of trees/density of plantings

-Feet of stream bank stabilized and treatments used.
-Length of streambank stabilized (miles, count both sides of stream where applicable)
-Length of riparian streambank treated (miles, count both sides of stream where applicable)
-Amount of riparian area treated (acres, including fencing, excluding invasive species treatment)
-Amount of riparian area treated for invasive species (acres)
-Trees planted (number)
-Fence length installed/repaired (miles, actual length of fence)

Riparian Restoration (HR)

a. Miles of stream treated overall (count stream reach only once, even if it has multiple treatments);
b. Miles of riparian stream bank treated (measure both sides of bank, if appropriate);
c. Acres of riparian area treated (total);
d. Acres of riparian area planted;
e. Species scientific name(s) of plants planted;
f. Miles of fence installed/repaired;
g. Number of livestock water gap installations;
h. Acres of riparian area treated for removal of non-native invasive plants; and
i. Species scientific name(s) of plants removed

Water Quality Projects (TW, HR, HU, HS)

- Water quality limitations addressed by the project (e.g., sediment, turbidity, heat, nutrient loading, chemical pollution.
- Water quality limitations addressed by the project (e.g. 303(d), TMDL)

VI Regulatory Compliance

All Projects

The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Upper Russian River Exotic Invasives Removal Project.

ALL IMPLEMENTATION PROJECTS

The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured. Obtaining all necessary permits and consultations is the responsibility of the Grantee.

ALL PROJECTS WITH PLANTING COMPONENT

Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings.

The standard for success is 80% survival of plantings, after a period of three years.

ALL PROJECTS WITH INSTREAM COMPONENT HS HI CF PM HB HU FL SC

All habitat improvements will follow techniques described in the Third Edition, January 1998, of the California Salmonid Stream Habitat Restoration Manual, Flosi et al. and the California Salmonid Stream Restoration Manual, Third Edition, Volume II, Part XI, January 2004.

Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

The Grantee shall notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted.

The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area.

If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:

- Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
- The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
- All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), *Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act*, June 2000.
- The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game, unless the relocation work is performed by DFG personnel.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual.*

Exhibit C
Upper Russian River Exotic Invasive Removal Project
Project Location Map
T15N, R12W, Elledge Peak Quad
Mendocino County

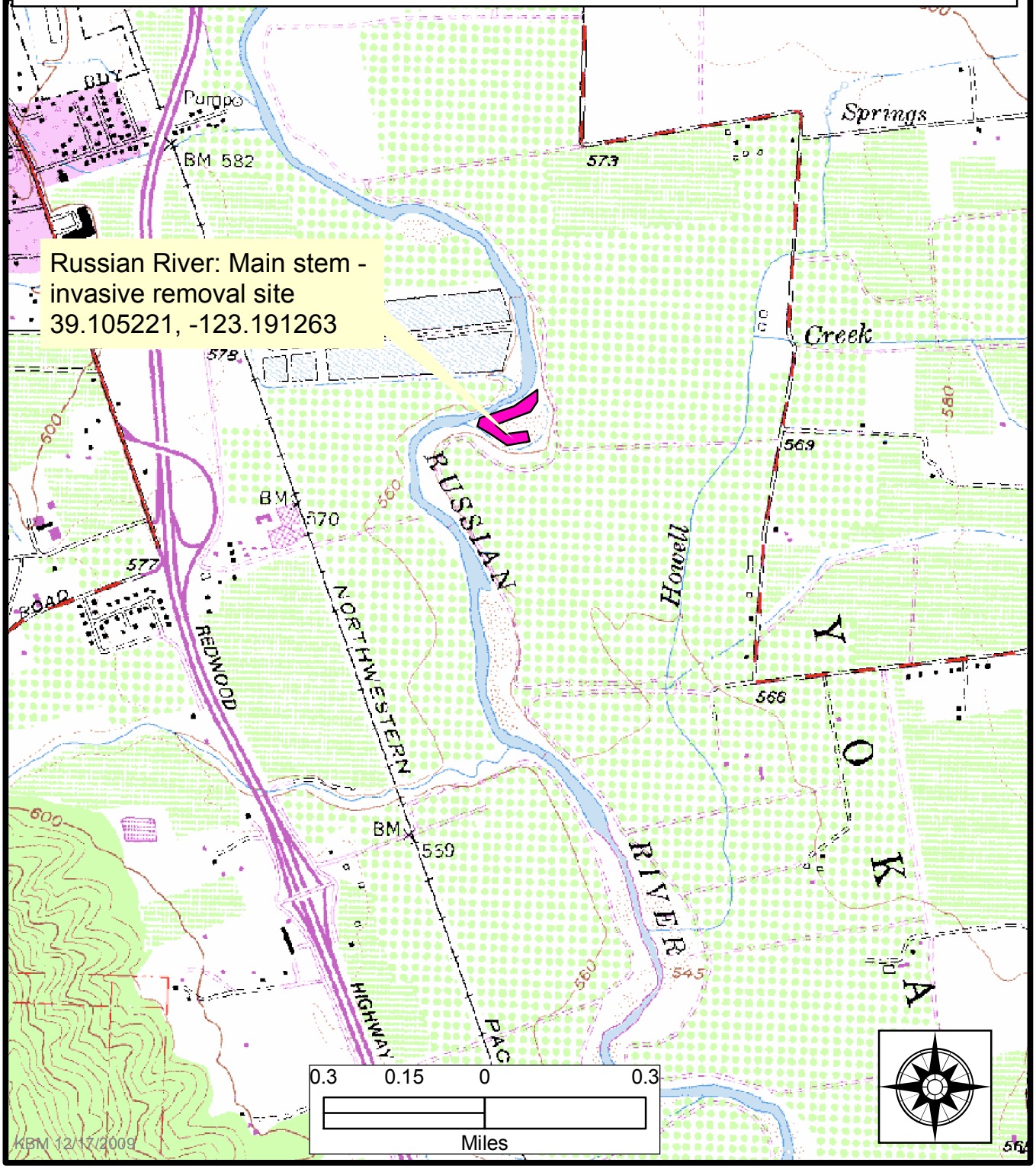


Exhibit C
Upper Russian River Exotic Invasive Removal Project
Project Location Map
T14N, R12W, Elledge Peak Quad
Mendocino County

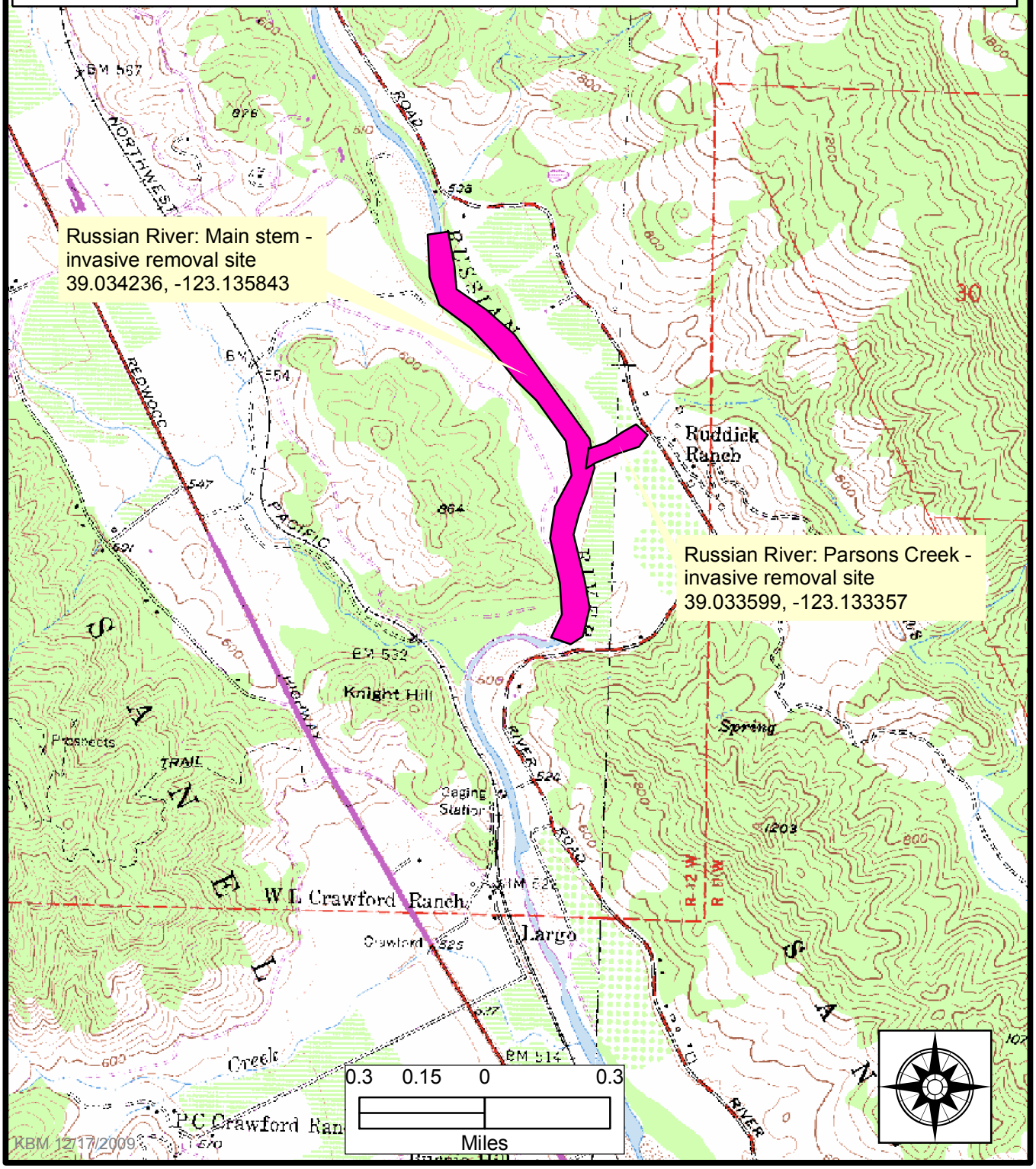
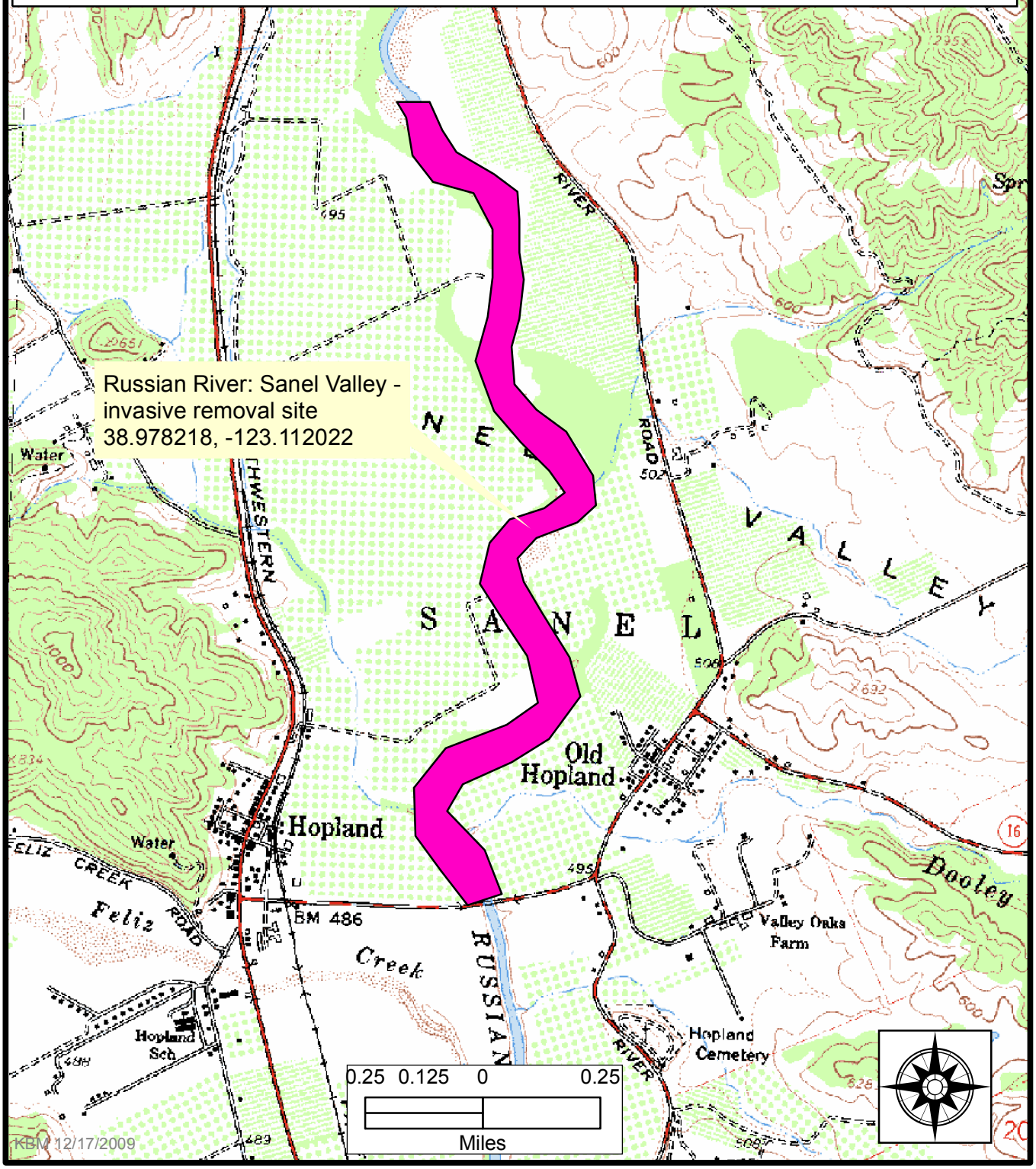
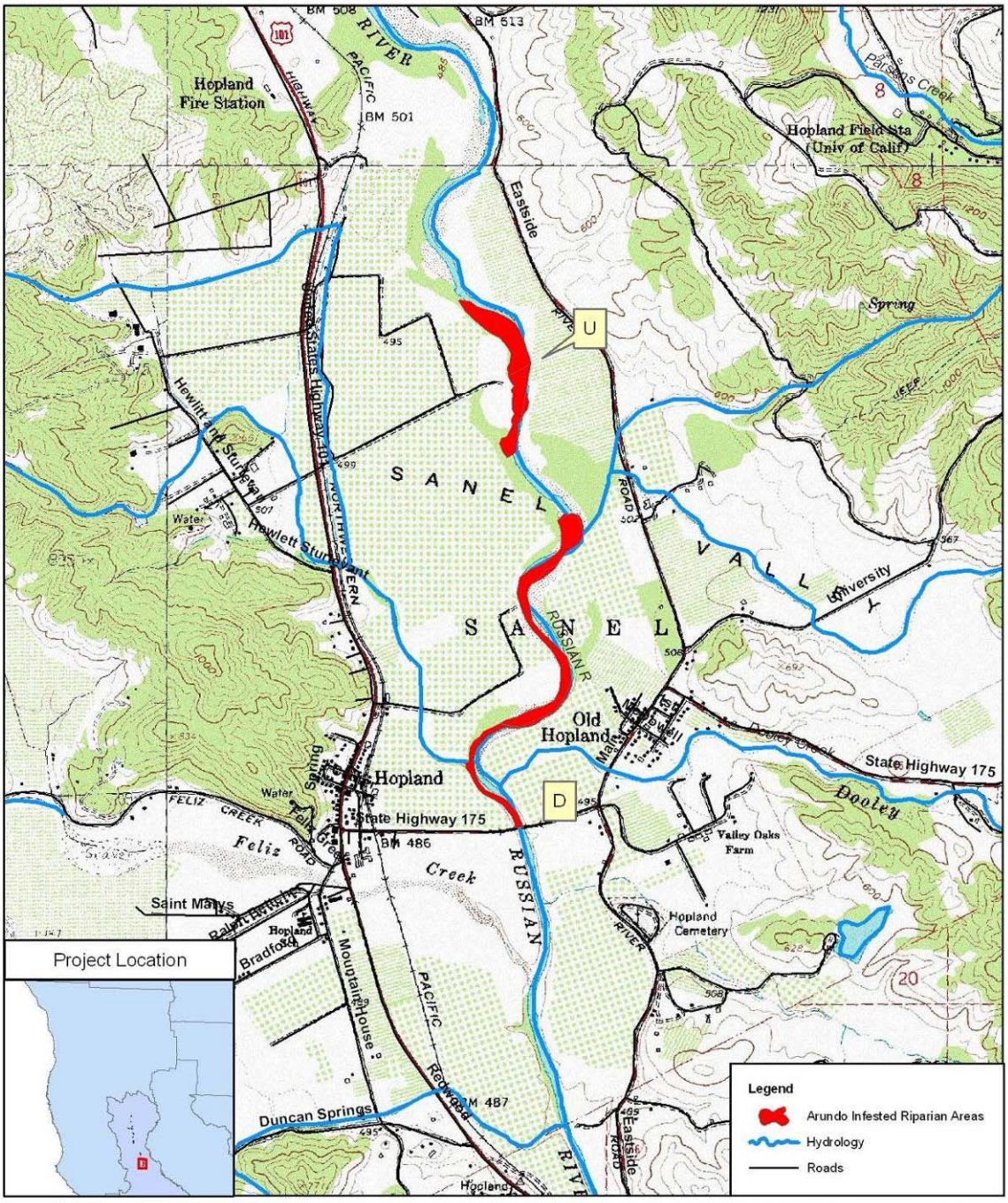


Exhibit C
Upper Russian River Exotic Invasive Removal Project
Project Location Map
T13N, R11W, Hopland Quad
Mendocino County

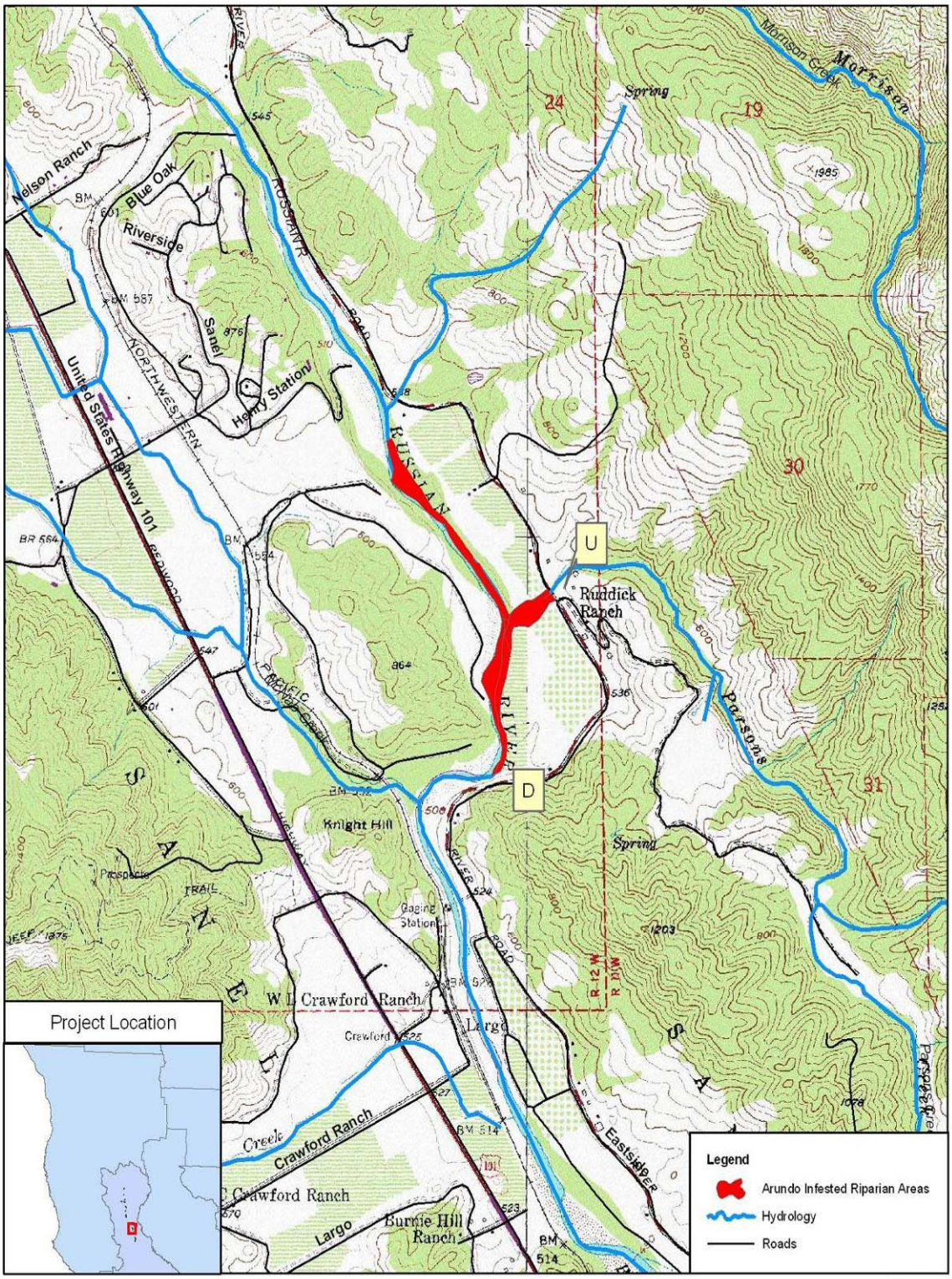


Section 8.3. Project location maps

Upper Russian River Noxious Invasives Removal and Riparian Restoration Project
Sanel Valley



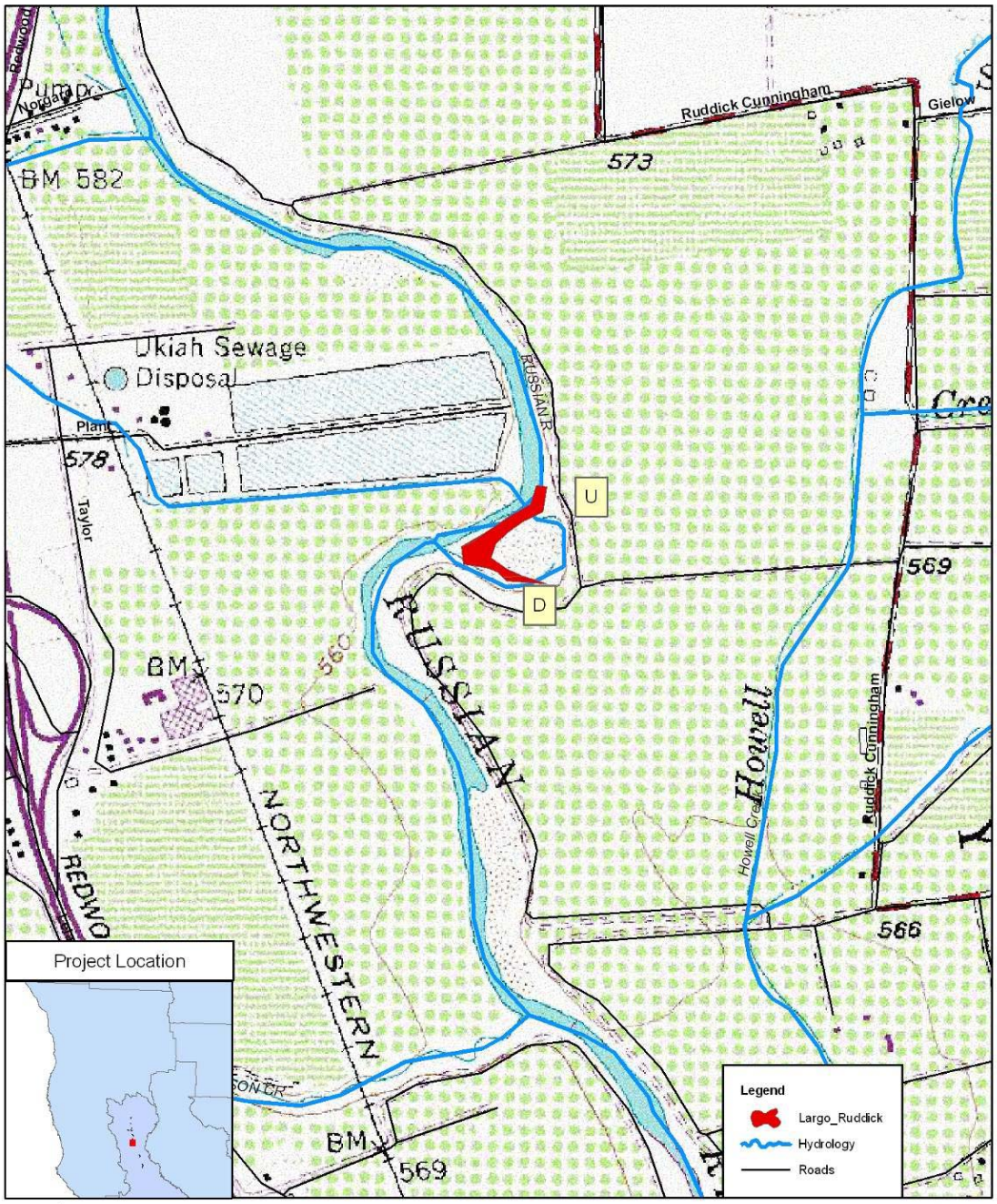
Upper Russian River Noxious Invasives Removal and Riparian Restoration Project
Parsons Creek



Prepared by Nicole Porter, MCRCD
206 Mason St., Ste F
Ukiah, CA 95482
(707) 462-3664
May 11, 2009

MENDOCINO COUNTY RESOURCE CONSERVATION DISTRICT

Upper Russian River Exotic Invasives Removal and Riparian Restoration Project
Mainstem Russian, North of Robinson Creek



Russian River Watershed
Project Location Topo Map
Elledge Peak Quad

Prepared by Nicole Porter, MCRCD
206 Mason St., Ste F
Ukiah, CA 95482
(707) 462-3664
May 11, 2009

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
723332_020_HR_Upper Russian River Exotic Invasive Removal Project
T13N, R11W, S 018, 019; T14N, R12W, S 025,036; T15N, R12W, S 033

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	American badger *Taxidea taxus*	AMAJF04010			G5	S4	SC
2	Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	IIHYM35030			G2	S2	
3	California red-legged frog *Rana draytonii*	AAABH01022	Threatened		G4T2T3	S2S3	SC
4	Clear Lake hitch *Lavinia exilicauda chi*	AFCJB19011			G5T2	S2	SC
5	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
6	Colusa layia *Layia septentrionalis*	PDAST5N0F0			G2	S2.2	1B.2
7	Mayacamas popcorn-flower *Plagiobothrys lithocaryus*	PDBOR0V0P0			GH	SH	1A
8	Norris' beard moss *Didymodon norrisii*	NBMUS2C0H0			G2G3	S2.2	2.2
9	Pacific fisher *Martes pennanti (pacifica) DPS*	AMAJF01021	Candidate	unknown code...	G5	S2S3	SC
10	Sacramento perch *Archoplites interruptus*	AFCQB07010			G3	S1	SC
11	beaked tracyina *Tracyina rostrata*	PDAST9D010			G1G2	S1S2.2	1B.2
12	bent-flowered fiddleneck *Amsinckia lunaris*	PDBOR01070			G2	S2.2	1B.2
13	double-crested cormorant *Phalacrocorax auritus*	ABNFD01020			G5	S3	
14	glandular western flax *Hesperolinon adenophyllum*	PDLIN01010			G2	S2.3	1B.2
15	great blue heron *Ardea herodias*	ABNGA04010			G5	S4	
16	green jewel-flower *Streptanthus breweri var. hesperidis*	PDBRA2G092			G5T2	S2.2	1B.2
17	osprey *Pandion haliaetus*	ABNKC01010			G5	S3	
18	serpentine cryptantha *Cryptantha clevelandii var. dissita*	PDBOR0A0H2			G5T1	S1.1	1B.1
19	tricolored blackbird *Agelaius tricolor*	ABPBXB0020			G2G3	S2	SC

EXHIBIT A
Standley Creek Watershed Implementation, Phase III
SCOPE OF WORK

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Implement site specific erosion control measures to protect and improve salmonid spawning and rearing habitat for Chinook and coho salmon, and steelhead trout in a selected section of Standley Creek, tributary to the South Fork Eel River in Mendocino County, California. The objective is to save approximately 14,251 cubic yards of potential sediment delivery by dispersing road runoff on 1.15 miles of road, reestablishing natural drainage patterns at approximately 12 stream crossings and removing or stabilizing sediment from 13 sites along the alignment.

2. Conduct work on abandoned and seasonal roads in Standley Creek watershed beginning approximately 4.0 miles upstream from the confluence with South Fork Eel River. The project is located in Township 24N, Range 18W, Sections 22 and 27 of the Piercy 7.5 Minute U.S.G.S. Quadrangle, 39.942 N latitude and 123.817 W longitude as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

3. Decommission 1.15 miles of road at 25 sites thereby saving approximately 14,251 cubic yards of sediment from delivery to Standley Creek. The Grantee shall decommission 12 stream crossings. The Grantee will treat 12 landslides which include road-fill failures. The Grantee will treat one "other" site including concentrated road surface drainage. The following treatments will be implemented where appropriate:
   - Excavation of in-place stream crossings at locations where roads or landings were built across stream channels. This includes complete excavation of the fill, including the culvert or Humboldt log crossing so the original stream bed and side slopes are exhumed. A stream crossing excavation includes removing the culvert and the underlying and the adjacent fill material. Complete excavation of stream crossing fills, includes 100 year flood channel bottom widths and 2:1 or otherwise stable side slopes. When possible the excavated spoil will be stored at nearby stable locations where it will not erode. If there is a limited amount of stable storage locations at the excavation site the crossing fill material will be hauled off-site for storage.
   - Road surface treatments: 1) ripping of the surface of the road or landing using mechanical rippers to reduce surface runoff and improve revegetation; 2) in-place outsloping or the excavation of unstable side cast material that could fail and deliver sediment to a stream along the outside edge of a road prism or landing and the replacement of the spoil on the roadbed against the corresponding adjacent cutbank, or in close proximity of the site; 3) exported out-sloping which involves not placing the material against the cutbank so the material is end hauled to a

spoil disposal site; 4) installation of cross drains or deep water bars at 50, 75, 100 or 200 foot intervals or as necessary at springs and seeps to disperse road surface runoff. The cross road drains provide road surface drainage and prevent the collection of concentrated runoff on the former roadbed.

- Seeding and mulching of all exposed soils which may deliver sediment to a stream. Woody debris will be concentrated on finished slopes adjacent to stream crossings. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years.

4. All crossings treated in fish bearing reaches of streams will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for adult and juvenile salmonid fish passage as described in the Third Edition, Volume II, Part IX, February 2003, of the *California Salmonid Stream Habitat Restoration Manual*.

5. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.

6. Sites which are expected to erode and deliver sediment to the stream are the only locations where work will be authorized for reimbursement under the terms of this agreement. Reimbursement will not be authorized for work done to improve aesthetics only.

7. Notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
   - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
   - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
   - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
   - The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
   - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.

8. Mulching and seeding will take place as sites are completed to avoid unforeseen erosion. Planting of tree seedlings will take place after December 1 or when

sufficient rainfall has occurred to insure the best chance of survival of the seedlings. The standard for success is 80% survival of plantings, after a period of three years.

9. All road decommissioning will be done in accordance with techniques described in the Handbook for Forest and Ranch Roads, (PWA, 1994c.) and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part X, March 2006. All road decommissioning and upgrade sites and techniques shall be approved by the Grant Manager before any equipment work takes place.

10. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*, Flosi et al and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part XI, January 2004.

11. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

12. If the project will not be completed by March 31, 2012, and therefore the grantee will be requesting an amendment for time, this request and a justification for the delay resulting in the time request must be submitted no later than December 1, 2011.

13. An annual report will be submitted each year, no later than December 1, detailing the work completed that field season. The annual report will include, but not necessarily be limited to the following where applicable:

    - Implementation start and end dates
    - Percentage of the project completed in total to date
    - Dewatering and fish relocation on DFG data sheet (to be provided by the DFG Grant Manager upon request)
    - Project start and end dates for work to be implemented the following season

    The annual report will also include, on a site by site basis:

    - Road length segment decommissioned or upgraded per road segment
    - Sediment spoils volume estimate per road segment
    - Upslope stream crossings decommissioned (not for fish passage)
    - Stream crossings treated to improve fish passage (number)
    - Stream crossing upgraded
    - Stream length opened for fish passage by improving stream crossings (miles)
    - Sediment volume prevented from entering the stream per crossing
    - Sediment spoils volume estimate per crossing
    - Upslope area treated (sq ft) (landslides, bank stabilization)
    - Amount of riparian area treated per site in acres
    - Number of trees planted

14. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, Microsoft Word compatible, copy on a CD. The report shall include, but not necessarily be limited to the following information:
    - Grant number
    - Project name
    - Geographic area (e.g., watershed name)
    - Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
    - Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
    - Project start and end dates and the number of person hours expended
    - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
    - Expected benefits to anadromous salmonids from the project
    - Labeled before and after photographs of any restoration activities and techniques
    - Specific project access using public and private roads and trails, with landowner name and address
    - Complete as built project description
    - Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HU)
(Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
    - Design spec achieved
    - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Upland Habitat Projects (HU)

- Number of actions (road decommission / upgrade)
- Total acres of upslope area treated.
- Total miles of road treated.
- Miles of road treated for road drainage system improvements.
- Miles of road decommissioned.
- Number of cubic yards of sediment saved from entering the stream.

Fish Passage Improvement Projects (HB):

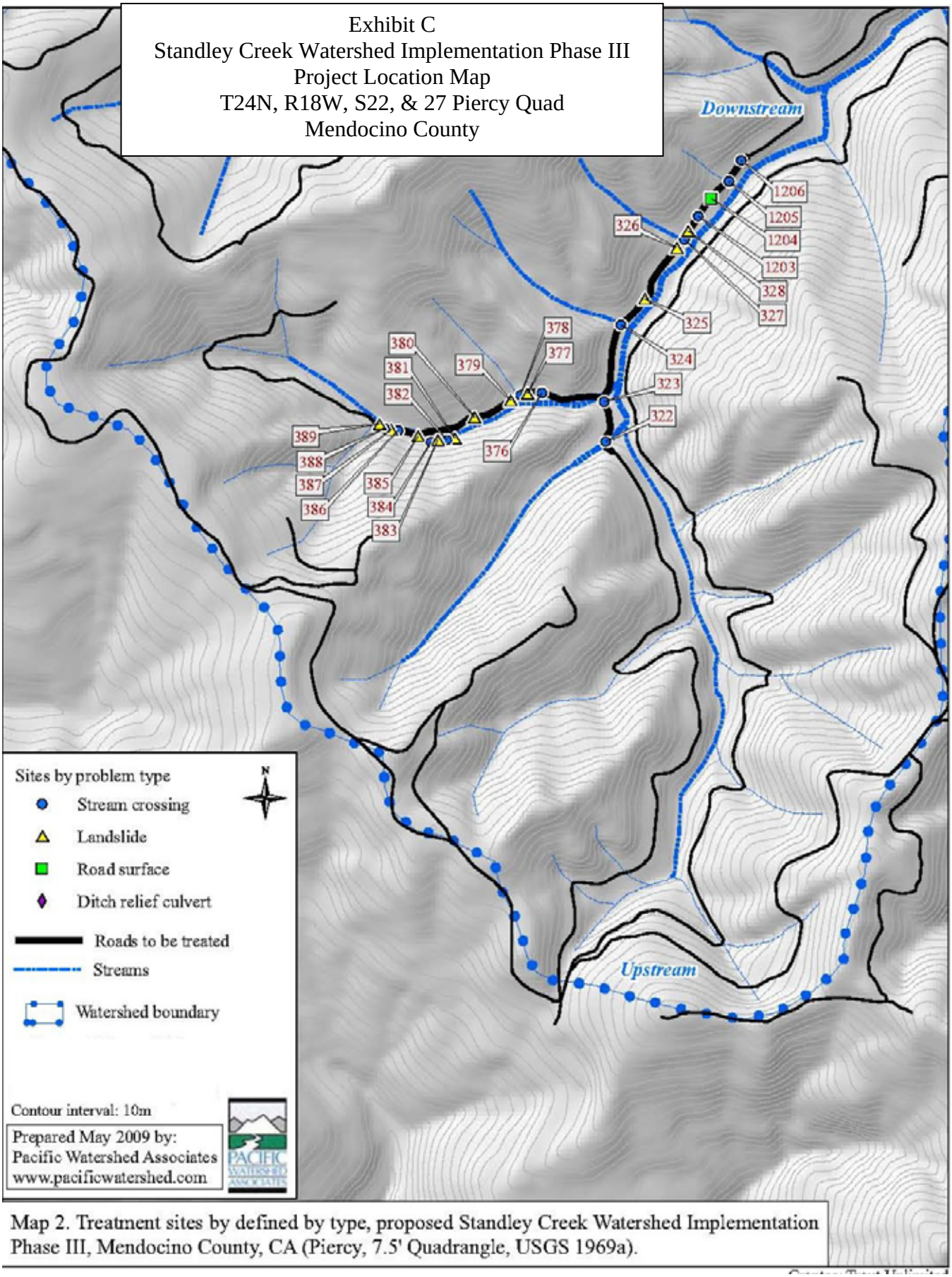
- Miles of stream treated.
- Types of crossings treated, select from: culvert, bridge or ford.
- Miles of stream made more accessible by treating stream crossings.
- Number of road crossings removed.
- Number of barriers other than culverts treated for fish passage.
- Miles of stream made more accessible by removing barriers other than culverts.

Riparian Habitat Projects (HR, HS)

- Miles of stream treated overall, count stream reach only once.
- Miles of riparian stream bank treated, measure both sides of the bank.
- Total acres of riparian area treated.
- Acres of riparian area planted.
- Species scientific names of plants planted.

15. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Standley Creek Watershed Implementation, Phase III.

Exhibit C
Standley Creek Watershed Implementation Phase III
Project Location Map
T24N, R18W, S22, & 27 Piercy Quad
Mendocino County



Map 2. Treatment sites by defined by type, proposed Standley Creek Watershed Implementation Phase III, Mendocino County, CA (Piercy, 7.5' Quadrangle, USGS 1969a).

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
Possible Species within the Piercy Quad and Surrounding Quads for:
Standley Creek Watershed Implementation Phase III
T24N R18W S22 and 27
United States

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	California floater *Anodonta californiensis*	IMBIV04020			G3Q	S2?	
2	Cooper's hawk *Accipiter cooperii*	ABNKC12040			G5	S3	
3	Howell's montia *Montia howellii*	PDPOR05070			G3G4	S3	2.2
4	Humboldt milk-vetch *Astragalus agnicidus*	PDFAB0F080		Endangered	G2	S2.1	1B.1
5	Kellogg's buckwheat *Eriogonum kelloggii*	PDPGN083A0	Candidate	Endangered	G1	S1.2	1B.2
6	Mcdonald's rock-cress *Arabis macdonaldiana*	PDBRA06150	Endangered	Endangered	G2	S2.1	1B.1
7	Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0			G2	S2.2	1B.2
8	Mendocino gentian *Gentiana setigera*	PDGEN060S0			G2	S1	1B.2
9	Northern Interior Cypress Forest	CTT83220CA			G2	S2.2	
10	Oregon coast paintbrush *Castilleja affinis ssp. litoralis*	PDSCR0D012			G4G5T4	S2.2	2.2
11	Oregon goldthread *Coptis laciniata*	PDRAN0A020			G4G5	S2.2	2.2
12	Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6			G5T3T4	S2.2?	1B.2
13	Pacific tailed frog *Ascaphus truei*	AAABA01010			G4	S2S3	SC
14	Point Reyes horkelia *Horkelia marinensis*	PDROS0W0B0			G2	S2.2	1B.2
15	Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	PDERI041G2			G3T2?	S2?	1B.1
16	Red Mountain catchfly *Silene campanulata ssp. campanulata*	PDCAR0U0A2		Endangered	G5T3Q	S3.2	4.2
17	Red Mountain stonecrop *Sedum eastwoodiae*	PDCRA0A1S0	Candidate		G1	S1.2	1B.2
18	Sonoma canescent manzanita *Arctostaphylos canescens ssp. sonomensis*	PDERI04066			G3G4T2	S2.1	1B.2
19	Sonoma tree vole *Arborimus pomo*	AMAFF23030			G3	S3	SC
20	Upland Douglas Fir Forest	CTT82420CA			G4	S3.1	
21	Whitney's farewell-to-spring *Clarkia amoena ssp. whitneyi*	PDONA05025			G5T2	S2.1	1B.1
22	coast fawn lily *Erythronium revolutum*	PMLIL0U0F0			G4	S3	2.2
23	coho salmon - central California coast ESU *Oncorhynchus kisutch*	AFCHA02034	Endangered	Endangered	G4	S2?	

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
25	leafy reed grass *Calamagrostis foliosa*	PMPOA170C0		Rare	G3	S3.2	4.2
26	leafy-stemmed mitrewort *Mitella caulescens*	PDSAX0N020			G5	S4.2	4.2
27	long-beard lichen *Usnea longissima*	NLLEC5P420			G4	S4.2	
28	maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0			G3G4	S3S4.2	4.2
29	northern goshawk *Accipiter gentilis*	ABNKC12060			G5	S3	SC
30	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
31	osprey *Pandion haliaetus*	ABNKC01010			G5	S3	
32	oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080			G5	S2.3	2.3
33	pallid bat *Antrozous pallidus*	AMACC10010			G5	S3	SC
34	robust monardella *Monardella villosa ssp. globosa*	PDLAM180P7			G5T2	S2.2	1B.2
35	southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020			G3G4	S2S3	SC
36	summer-run steelhead trout *Oncorhynchus mykiss irideus*	AFCHA0213B			G5T4Q	S2	SC
37	western pearlshell *Margaritifera falcata*	IMBIV27020			G4	S2S3?	
38	western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC
39	white-flowered rein orchid *Piperia candida*	PMORC1X050			G3	S3.2	1B.2

EXHIBIT A

North Fork Ten Mile River Large Wood Enhancement Project

SCOPE OF WORK

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Improve spawning and rearing habitat for coho salmon and steelhead trout by increasing habitat diversity in North Fork Ten Mile River, a tributary to the Ten Mile River in Mendocino County. The objective is to improve the quality and quantity of salmonid habitat by placing large wood instream to increase stream complexity and pool frequency; provide winter holding habitat and summer rearing habitat; and sort and collect spawning gravel.

2. The Grantee will conduct work along a section of North Fork Ten Mile River beginning at the confluence with Ten Mile River and Middle Fork Ten Mile River and continuing upstream for 13 miles. The upstream end of the project site is located in Township 20 North, Range 16 West, Section 24 of the Sherwood Peak 7.5 Minute U.S.G.S. Quadrangle. The downstream end of the project site is located in Township 20 North, Range 17 West, Section 25 of the Dutchmans Knoll 7.5 Minute U.S.G.S. Quadrangle. The locations of the project boundaries are approximately 39.5720 north latitude, 123.7098 west longitude at the downstream end, and 39.5793 north latitude, 123.5841 west longitude at the upstream end as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

3. Habitat improvements will be accomplished by installing instream habitat structures along a 13 mile stretch of stream using approximately 390 pieces of large wood/root wads. Final structure design and placement will be determined by field consultation between the Grantee and the DFG Grant Manager.

4. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.

5. Work will consist of the following:
   - A modified Level II stream inventory will be conducted to provide pre-project stream habitat information. Large woody debris (LWD) availability will be assessed during this inventory. Preliminary site plans will be developed including photos and sketches.
   - The DFG Grant Manager will evaluate proposed treatments and approve, modify, or delete specific sites or designs.
   - Approximately 260 standing timber pieces of wood and 130 salvaged pieces of LWD will be placed within the 13 mile stretch of North Fork Ten Mile River. A rubber-tire skidder will be used to place and reposition LWD if needed.
   - The wood will be unanchored.
   - Minimum wood length will be 1.5 times the bankfull width of the stream.
   - Logs will be uniquely marked with sequentially numbered aluminum tags.
   - The Grantee will collect post-project data including but not limited to log length, log diameters, log volume, and stream location.

6. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

7. The Grantee shall notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other aquatic species from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
   - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
   - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
   - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
   - The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
   - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.

8. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*, Flosi et al. and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part XI, January 2004.

9. If the project will not be completed by March 31, 2012, and therefore the grantee will be requesting an amendment for time, this request and a justification for the delay resulting in the time request must be submitted no later than December 1, 2011.

10. An annual report will be submitted each year, no later than December 1, detailing the work completed that field season. The annual report will include, but not necessarily be limited to the following where applicable:

    - Implementation start and end dates
    - Percentage of the project completed in total to date
    - Dewatering and fish relocation on DFG data sheet (to be provided by the DFG grant manager upon request)
    - Project start and end dates for work to be implemented the following season

    The annual report will also include, on a site by site basis:

    - Stream length treated in feet (count one side only)
    - Length of aquatic habitat disturbed (feet)
    - Number of instream structures installed/modified
    - Area of each structure installed within bankfull width (length x width)
    - Length of instream habitat treated excluding bank stabilization

11. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, Microsoft Word compatible, copy on a CD. The report shall include, but not

necessarily be limited to the following information:

- Grant number
- Project name
- Geographic area (e.g., watershed name)
- Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
- Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
- Project start and end dates and the number of person hours expended
- Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
- Expected benefits to anadromous salmonids from the project
- Labeled before and after photographs of any restoration activities and techniques
- Specific project access using public and private roads and trails, with landowner name and address
- Complete as built project description
- A report summarizing the type II habitat typing data and the post-project data collected.
- Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HI)
(Report N/A to those that do not apply)

Habitat Projects: (all)

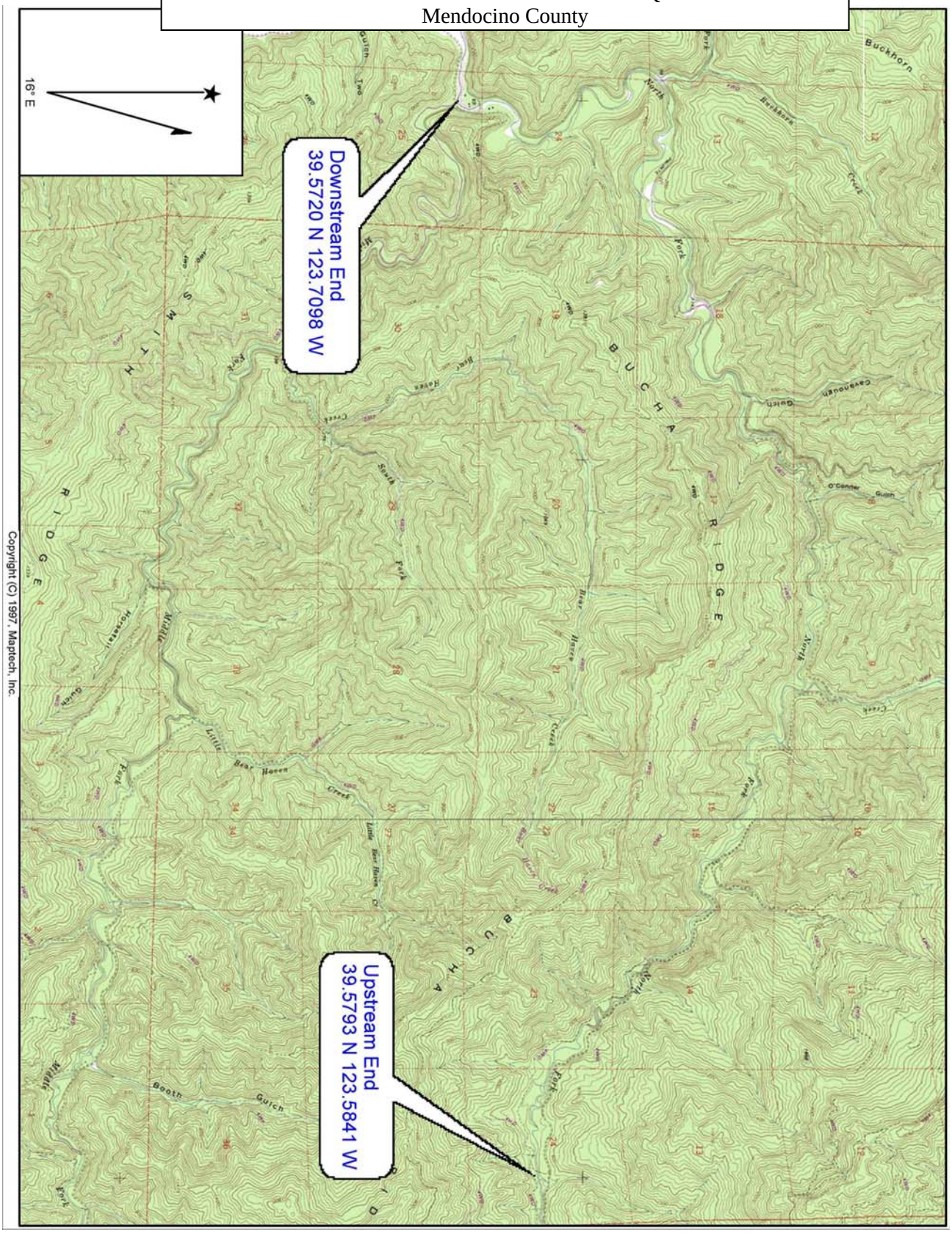
- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
    - Design spec achieved
    - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Instream Habitat Projects (HI)

- Description of instream treatments used, including site locations referenced to an established landmark, number of treatment sites, and any modifications to site/treatment design.
- Type of materials used for channel structure placement, select from: individual logs (unanchored); logs fastened together (logjam); rocks/boulders (unanchored); rocks/boulders (fastened or anchored); stumps with roots attached (root wads); weirs; gabions; deflectors/barbs; or other engineered structures
- Miles of stream treated with channel structure placement
- Number of instream pools created by structure placement
- Number of structures placed in channel.

12. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the North Fork Ten Mile River Large Wood Enhancement Project.

Exhibit C
North Fork Ten Mile River Large Wood Enhancement Project
Project Location Map
T20N, R17W, S13, 24, 25; T20N R16W S8,9,14,15,16,17,18,23
Dutchmans Knoll and Sherwood Peak Quads
Mendocino County



California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
Possible Species within the Dutchmans Knoll and Sherwood Peak Quads and Surrounding Quads for:
North Fork Ten Mile River Large Wood Enhancement Project
T20N R16W S8, 9, 14, 15, 16, 17, 18, 23 ,24; T20N R17W S13, 24, 25
United States

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	American badger *Taxidea taxus*	AMAJF04010			G5	S4	SC
2	Baker's goldfields *Lasthenia californica ssp. bakeri*	PDAST5L0C4			G3TH	SH	1B.2
3	Baker's meadowfoam *Limnanthes bakeri*	PDLIM02020		Rare	G1	S1.1	1B.1
4	Baker's navarretia *Navarretia leucocephala ssp. bakeri*	PDPLM0C0E1			G4T2	S2.1	1B.1
5	Blasdale's bent grass *Agrostis blasdalei*	PMPOA04060			G2	S2.2	1B.2
6	Bolander's beach pine *Pinus contorta ssp. bolanderi*	PGPIN04081			G5T3	S3.2	1B.2
7	California floater *Anodonta californiensis*	IMBIV04020			G3Q	S2?	
8	California sedge *Carex californica*	PMCYP032D0			G5	S2?	2.3
9	Coastal Brackish Marsh	CTT52200CA			G2	S2.1	
10	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
11	Del Norte salamander *Plethodon elongatus*	AAAAD12050			G4	S3	SC
12	Fen	CTT51200CA			G2	S1.2	
13	Grand Fir Forest	CTT82120CA			G1	S1.1	
14	Howell's spineflower *Chorizanthe howellii*	PDPGN040C0	Endangered	Threatened	G1	S1.2	1B.2
15	Humboldt milk-vetch *Astragalus agnicidus*	PDFAB0F080		Endangered	G2	S2.1	1B.1
16	Lyngbye's sedge *Carex lyngbyei*	PMCYP037Y0			G5	S2.2	2.2
17	Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0			G2	S2.2	1B.2
18	Mendocino Pygmy Cypress Forest	CTT83161CA			G2	S2.1	
19	Menzies' wallflower *Erysimum menziesii ssp. menziesii*	PDBRA160E1	Endangered	Endangered	G3?T2	S2.1	1B.1
20	Milo Baker's lupine *Lupinus milo-bakeri*	PDFAB2B4E0		Threatened	G1Q	S1.1	1B.1
21	North Central Coast Fall-Run Steelhead Stream	CARA2631CA			G?	SNR	
22	North Coast phacelia *Phacelia insularis var. continentis*	PDHYD0C2B1			G2T1	S1.2	1B.2
23	North Coast semaphore grass *Pleuropogon hooverianus*	PMPOA4Y070		Threatened	G1	S1.1	1B.1
24	Northern Coastal Salt Marsh	CTT52110CA			G3	S3.2	
25	Nuttall's ribbon-leaved pondweed *Potamogeton epihydrus ssp. nuttallii*	PMPOT03081			G5T5	S2.2?	2.2

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
26	Oregon coast paintbrush *Castilleja affinis ssp. litoralis*	PDSCR0D012			G4G5T4	S2.2	2.2
27	Oregon goldthread *Coptis laciniata*	PDRAN0A020			G4G5	S2.2	2.2
28	Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6			G5T3T4	S2.2?	1B.2
29	Pacific tailed frog *Ascaphus truei*	AAABA01010			G4	S2S3	SC
30	Point Reyes blennosperma *Blennosperma nanum var. robustum*	PDAST1A022		Rare	G4T1	S1.2	1B.2
31	Point Reyes horkelia *Horkelia marinensis*	PDROS0W0B0			G2	S2.2	1B.2
32	Sonoma tree vole *Arborimus pomo*	AMAFF23030			G3	S3	SC
33	Sphagnum Bog	CTT51110CA			G3	S1.2	
34	Ten Mile shoulderband *Noyo intersessa*	IMGASC5070			G2	S2	
35	Thurber's reed grass *Calamagrostis crassiglumis*	PMPOA17070			G3Q	S1.2	2.1
36	Upland Douglas Fir Forest	CTT82420CA			G4	S3.1	
37	Whitney's farewell-to-spring *Clarkia amoena ssp. whitneyi*	PDONA05025			G5T2	S2.1	1B.1
38	Wolf's evening-primrose *Oenothera wolfii*	PDONA0C1K0			G1	S1.1	1B.1
39	alpine marsh violet *Viola palustris*	PDVIO041G0			G5	S1S2	2.2
40	coast fawn lily *Erythronium revolutum*	PMLIL0U0F0			G4	S3	2.2
41	coast lily *Lilium maritimum*	PMLIL1A0C0			G2	S2	1B.1
42	coastal triquetrella *Triquetrella californica*	NBMUS7S010			G1	S1.2	1B.2
43	dark-eyed gilia *Gilia millefoliata*	PDPLM04130			G2	S2.2	1B.2
44	deceiving sedge *Carex saliniformis*	PMCYP03BY0			G2	S2.2	1B.2
45	dwarf alkali grass *Puccinellia pumila*	PMPOA531B0			G4?	S1.1?	2.2
46	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
47	glandular western flax *Hesperolinon adenophyllum*	PDLIN01010			G2	S2.3	1B.2
48	globose dune beetle *Coelus globosus*	IICOL4A010			G1	S1	

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
49	grass alisma *Alisma gramineum*	PMALI01010			G5	S1S2	2.2
50	great burnet *Sanguisorba officinalis*	PDROS1L060			G5?	S2.2	2.2
51	green yellow sedge *Carex viridula var. viridula*	PMCYP03EM3			G5T5	S1.3	2.3
52	hair-leaved rush *Juncus supiniformis*	PMJUN012R0			G5	S2.2?	2.2
53	hoary bat *Lasiurus cinereus*	AMACC05030			G5	S4?	
54	lagoon sedge *Carex lenticularis var. limnophila*	PMCYP037A7			G5T5	S1S2.2	2.2
55	leafy reed grass *Calamagrostis foliosa*	PMPOA170C0		Rare	G3	S3.2	4.2
56	leafy-stemmed mitrewort *Mitella caulescens*	PDSAX0N020			G5	S4.2	4.2
57	long-beard lichen *Usnea longissima*	NLLEC5P420			G4	S4.2	
58	maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0			G3G4	S3S4.2	4.2
59	marbled murrelet *Brachyramphus marmoratus*	ABNNN06010	Threatened	Endangered	G3G4	S1	
60	northern goshawk *Accipiter gentilis*	ABNKC12060			G5	S3	SC
61	northern red-legged frog *Rana aurora*	AAABH01021			G4T4	S2?	SC
62	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
63	oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080			G5	S2.3	2.3
64	perennial goldfields *Lasthenia californica ssp. macrantha*	PDAST5L0C5			G3T2	S2.2	1B.2
65	pink sand-verbena *Abronia umbellata ssp. breviflora*	PDNYC010N2			G4G5T2	S2.1	1B.1
66	purple martin *Progne subis*	ABPAU01010			G5	S3	SC
67	purple-stemmed checkerbloom *Sidalcea malviflora ssp. purpurea*	PDMAL110FL			G5T2	S2.2	1B.2
68	pygmy cypress *Callitropsis pygmaea*	PGCUP04032			G2	S2	1B.2
69	robust false lupine *Thermopsis robusta*	PDFAB3Z0D0			G2Q	S2.2	1B.2
70	round-headed Chinese-houses *Collinsia corymbosa*	PDSCR0H060			G1	S1.2	1B.2

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
71	running-pine *Lycopodium clavatum*	PPLYC01080			G5	S4.1	4.1
72	seacoast ragwort *Packera bolanderi var. bolanderi*	PDAST8H0H1			G4T4	S1.2	2.2
73	seaside tarplant *Hemizonia congesta ssp. congesta*	PDAST4R065			G5T2T3	S2S3	1B.2
74	sharp-shinned hawk *Accipiter striatus*	ABNKC12020			G5	S3	
75	short-leaved evax *Hesperevax sparsiflora var. brevifolia*	PDASTE5011			G4T2T3	S2S3	1B.2
76	southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020			G3G4	S2S3	SC
77	swamp harebell *Campanula californica*	PDCAM02060			G3	S3	1B.2
78	tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered		G3	S2S3	SC
79	western pearlshell *Margaritifera falcata*	IMBIV27020			G4	S2S3?	
80	western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC
81	western snowy plover *Charadrius alexandrinus nivosus*	ABNNB03031	Threatened		G4T3	S2	SC
82	white beaked-rush *Rhynchospora alba*	PMCYP0N010			G5	S3.2	2.2
83	white-flowered rein orchid *Piperia candida*	PMORC1X050			G3	S3.2	1B.2

EXHIBIT A
Gualala Wood in the Stream Program
SCOPE OF WORK

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Improve spawning and rearing habitat for coho salmon and steelhead trout by increasing habitat diversity in Doty Creek, Little North Fork Gualala River, Robinson Creek, McGann Gulch, Dry Creek, and North Fork Gualala River, a tributary to Gualala River in Mendocino County. The objective is to improve the quality and quantity of salmonid habitat by placing large wood instream to increase stream complexity and pool frequency; provide winter holding habitat and summer rearing habitat; and sort and collect spawning gravel.

2. The Grantee will conduct work in Doty Creek, Little North Fork Gualala River, Robinson Creek, McGann Gulch, Dry Creek, and North Fork Gualala River beginning at the confluence with North Fork Gualala River and Gualala River approximately 3.3 miles upstream from the Pacific Ocean and continuing upstream for 4.9 miles. The upstream end of the project site is located in Township 12 North, Range 14 West, Section 24 of the Zeni Ridge 7.5 Minute U.S.G.S. Quadrangle. The downstream end of the project site is located in Township 11 North, Range 15 West, Section 25 of the McGuire Ridge 7.5 Minute U.S.G.S. Quadrangle. The locations of the project boundaries are approximately 38.778 north latitude, 123.499 west longitude at the downstream end, and 38.872 north latitude, 123.370 west longitude at the upstream end as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

3. Habitat improvements will be accomplished by placing unanchored large wood along approximately 10.4 miles of the North Fork Gualala and selected tributaries using approximately 262 pieces of large wood/root wads. Brush racks will be created and placed at seven designated locations with the North Fork Gualala River watershed. Final structure design and placement will be determined by field consultation between the Grantee and the DFG Grant Manager.

4. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.

5. Work will consist of the following:
   - Project Coordinator and technicians will identify sites for log placement within the 8 designated reaches.
   - The DFG Grant Manager may evaluate proposed treatments and approve, modify, or delete specific site designs.
   - Approximately 125 MBF of Douglas fir and/or redwood LWD will be placed within the 8 designated reaches within the North Fork Gualala watershed. An excavator and rubber-tire skidder will be used to place and reposition LWD if needed.
   - Logs will be tagged with a metal identification number as well as with highly visible paint in order to distinguish them from naturally recruited LWD.
   - Logs may be lowered into the streams where high lead logging operations cross overhead.
   - Minimum wood length will be 1.5 times the bankfull width of the stream.
   - The Grantee will supply the DFG Grant Manger with protocol for collecting post-project data. Crews will collect post-project data including but not limited to log length, log diameters, log

volume, and stream location, orientation, species, and square feet of each section of LWD that is within the bankfull width.
- Brush racks will be placed in selected pools where the stream is lacking shelter and thermal refugia.
- Brush racks will be constructed using willow, red alder, and natural fiber twine. Proper anchoring will be used in order to keep the feature from moving out of the pool.
- Brush racks will be removed from the stream channel before high winter flows.

6. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

7. The Grantee shall notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other aquatic species from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
   - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
   - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
   - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
   - The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
   - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.

8. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*, Flosi et al. and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part XI, January 2004.

9. If the project will not be completed by March 31, 2012, and therefore the grantee will be requesting an amendment for time, this request and a justification for the delay resulting in the time request must be submitted no later than December 1, 2011.

10. An annual report will be submitted each year, no later than December 1, detailing the work completed that field season. The annual report will include, but not necessarily be limited to the following where applicable:
    - Implementation start and end dates
    - Percentage of the project completed in total to date
    - Dewatering and fish relocation on DFG data sheet (to be provided by the DFG grant manager upon request)
    - Project start and end dates for work to be implemented the following season

The annual report will also include, on a site by site basis:

- Stream length treated in feet (count one side only)
- Length of aquatic habitat disturbed (feet)
- Number of instream structures installed/modified
- Area of each structure installed within bankfull width (length x width)
- Length of instream habitat treated excluding bank stabilization

11. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, Microsoft Word compatible, copy on a CD. The report shall include, but not necessarily be limited to the following information:
    - Grant number
    - Project name
    - Geographic area (e.g., watershed name)
    - Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
    - Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
    - Project start and end dates and the number of person hours expended
    - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
    - Expected benefits to anadromous salmonids from the project
    - Labeled before and after photographs of any restoration activities and techniques
    - Specific project access using public and private roads and trails, with landowner name and address
    - Complete as built project description
    - Data base report with log location, number of logs and volume of wood, GIS mapping of reaches with piece placement, effectiveness evaluation based on data analysis.
    - Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HI)
(Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
    - Design spec achieved
    - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Instream Habitat Projects (HI)

- Description of instream treatments used, including site locations referenced to an established landmark, number of treatment sites, and any modifications to site/treatment design.
- Type of materials used for channel structure placement, select from: individual logs (unanchored); logs fastened together (logjam); rocks/boulders (unanchored); rocks/boulders (fastened or anchored); stumps with roots attached (root wads); weirs; gabions; deflectors/barbs; or other engineered structures

- Miles of stream treated with channel structure placement
- Number of instream pools created by structure placement
- Number of structures placed in channel.

12. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Gualala Wood in the Stream Program.

Exhibit C
Gualala Wood in the Stream Program
Project Location Map 1
T11N R15W S 1, 3, 4, 9, 10, 10, 12; T11N R14W S 3, 4, 5, 7, 8, 9: T12N R14W S 13, 14, 23, 24, 34, 35
Gualala, McGuire Ridge, Zeni Ridge Quads
Mendocino County

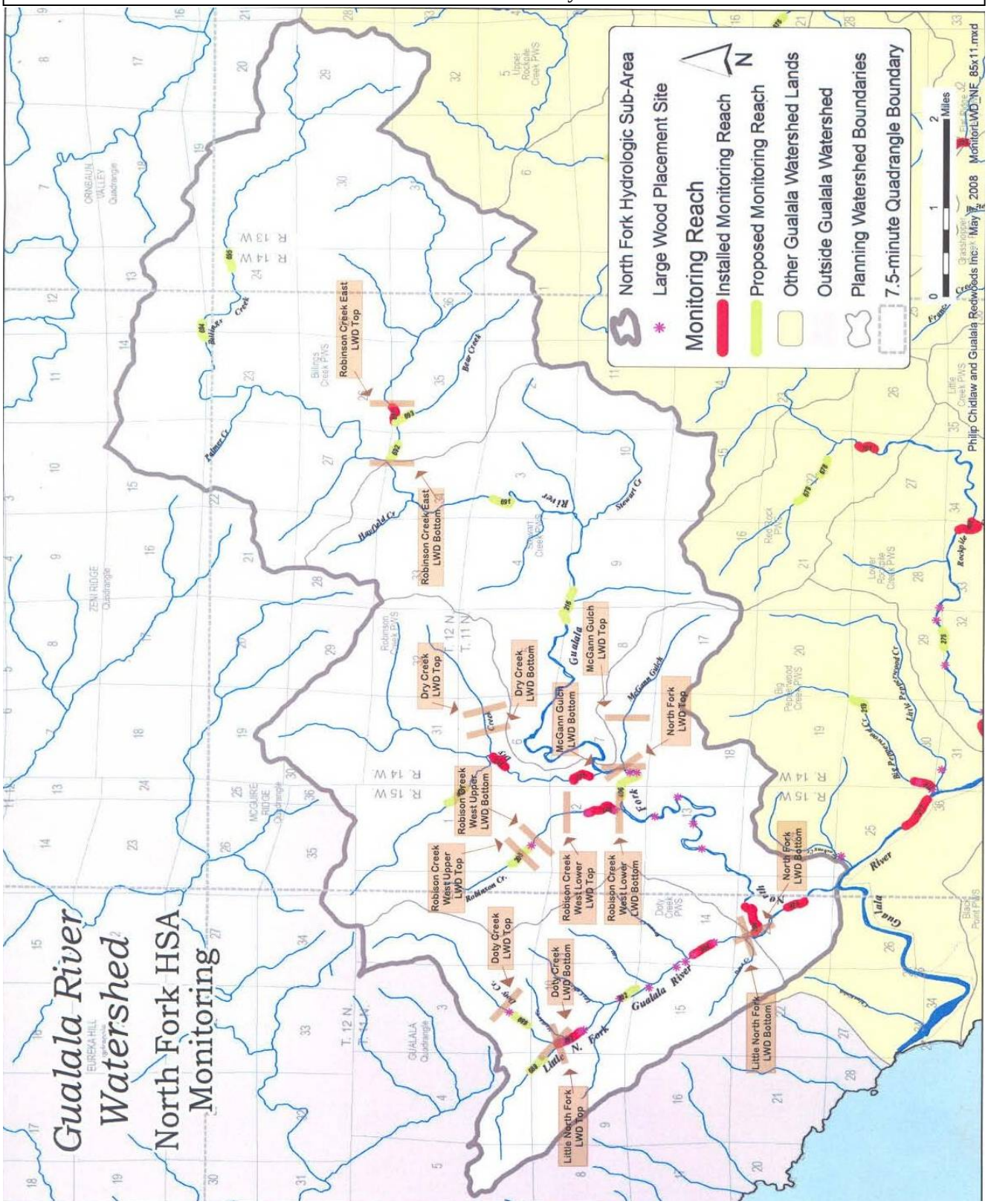
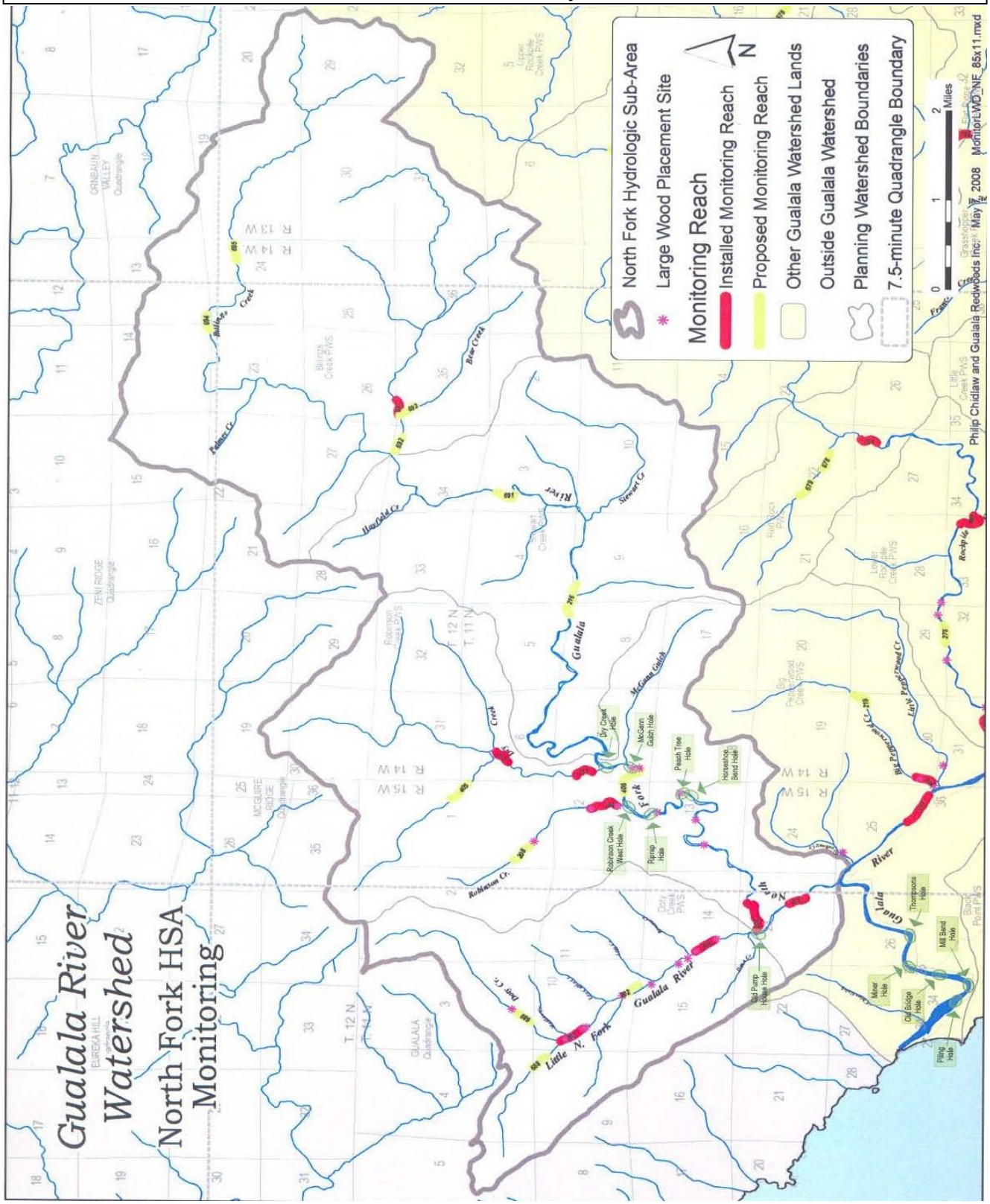


Exhibit C
Gualala Wood in the Stream Program
Project Location Map 2
T11N R15W S 1, 3, 4, 9, 10, 10, 12; T11N R14W S 3, 4, 5, 7, 8, 9: T12N R14W S 13, 14, 23, 24, 34, 35
Gualala, McGuire Ridge, Zeni Ridge Quads
Mendocino County



California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
Possible Species within the Gualala, McGuire Ridge, Zeni Moutain, and Gube Mountain Quads and Surrounding Quads for: Gualala Wood in the Stream Program
T11N R15W S 1, 3, 4, 9, 10, 10, 12; T11N R14W S 3, 4, 5, 7, 8, 9: T12N R14W S 13, 14, 23, 24, 34, 35
United States

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	American manna grass *Glyceria grandis*	PMPOA2Y080			G5	S1.3?	2.3
2	Baker's goldfields *Lasthenia californica ssp. bakeri*	PDAST5L0C4			G3TH	SH	1B.2
3	Behren's silverspot butterfly *Speyeria zerene behrensii*	IILEPJ6088	Endangered		G5T1	S1	
4	Blasdale's bent grass *Agrostis blasdalei*	PMPOA04060			G2	S2.2	1B.2
5	California red-legged frog *Rana draytonii*	AAABH01022	Threatened		G4T2T3	S2S3	SC
6	California sedge *Carex californica*	PMCYP032D0			G5	S2?	2.3
7	Coastal Brackish Marsh	CTT52200CA			G2	S2.1	
8	Coastal Terrace Prairie	CTT41100CA			G2	S2.1	
9	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
10	Cobb Mountain lupine *Lupinus sericatus*	PDFAB2B3J0			G2	S2.2	1B.2
11	Contra Costa goldfields *Lasthenia conjugens*	PDAST5L040	Endangered		G1	S1.1	1B.1
12	Gualala roach *Lavinia symmetricus parvipinnis*	AFCJB19025			G5T1T2	S1S2	SC
13	Guggolz's harmonia *Harmonia guggolziorum*	PDAST650M0			G1	S1.1	1B.1
14	Humboldt Bay owl's-clover *Castilleja ambigua ssp. humboldtiensis*	PDSCR0D402			G4T2	S2.2	1B.2
15	Humboldt milk-vetch *Astragalus agnicidus*	PDFAB0F080		Endangered	G2	S2.1	1B.1
16	Lyngbye's sedge *Carex lyngbyei*	PMCYP037Y0			G5	S2.2	2.2
17	Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0			G2	S2.2	1B.2
18	Morrison's jewel-flower *Streptanthus morrisonii*	PDBRA2G0S0			G2	S2	
19	Northern Coastal Bluff Scrub	CTT31100CA			G2	S2.2	
20	Northern Coastal Salt Marsh	CTT52110CA			G3	S3.2	
21	Oregon goldthread *Coptis laciniata*	PDRAN0A020			G4G5	S2.2	2.2
22	Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6			G5T3T4	S2.2?	1B.2
23	Pacific tailed frog *Ascaphus truei*	AAABA01010			G4	S2S3	SC
24	Point Arena mountain beaver *Aplodontia rufa nigra*	AMAFA01011	Endangered		G5T1	S1	SC

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
25	Point Reyes bent grass *Agrostis clivicola var. punta-reyesensis*	PMPOA040A2			G3?T1Q	S1.2	
26	Point Reyes checkerbloom *Sidalcea calycosa ssp. rhizomata*	PDMAL11012			G5T2	S2.2	1B.2
27	Point Reyes horkelia *Horkelia marinensis*	PDROS0W0B0			G2	S2.2	1B.2
28	Pomo bronze shoulderband *Helminthoglypta arrosa pomoensis*	IMGASC2033			G2G3T1	S1	
29	Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	PDERI041G2			G3T2?	S2?	1B.1
30	Rincon Ridge ceanothus *Ceanothus confusus*	PDRHA04220			G2	S2.2	1B.1
31	Roderick's fritillary *Fritillaria roderickii*	PMLIL0V0M0		Endangered	G1Q	S1.1	1B.1
32	Santa Cruz clover *Trifolium buckwestiorum*	PDFAB402W0			G1	S1.1	1B.1
33	Sonoma tree vole *Arborimus pomo*	AMAFF23030			G3	S3	SC
34	The Cedars fairy-lantern *Calochortus raichei*	PMLIL0D1L0			G1	S1.2	1B.2
35	The Cedars manzanita *Arctostaphylos bakeri ssp. sublaevis*	PDERI04222		Rare	G2T2	S2.2	1B.2
36	Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010			G4	S2S3	SC
37	Yuma myotis *Myotis yumanensis*	AMACC01020			G5	S4?	
38	bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S2	
39	beaked tracyina *Tracyina rostrata*	PDAST9D010			G1G2	S1S2.2	1B.2
40	coast fawn lily *Erythronium revolutum*	PMLIL0U0F0			G4	S3	2.2
41	coast lily *Lilium maritimum*	PMLIL1A0C0			G2	S2	1B.1
42	coastal bluff morning-glory *Calystegia purpurata ssp. saxicola*	PDCON040D2			G4T2	S2.2	1B.2
43	deceiving sedge *Carex saliniformis*	PMCYP03BY0			G2	S2.2	1B.2
44	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
45	hoary bat *Lasiurus cinereus*	AMACC05030			G5	S4?	
46	long-beard lichen *Usnea longissima*	NLLEC5P420			G4	S4.2	

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
47	maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0			G3G4	S3S4.2	4.2
48	marbled murrelet *Brachyramphus marmoratus*	ABNNN06010	Threatened	Endangered	G3G4	S1	
49	marsh microseris *Microseris paludosa*	PDAST6E0D0			G2	S2.2	1B.2
50	marsh pea *Lathyrus palustris*	PDFAB250P0			G5	S2S3	2.2
51	monarch butterfly *Danaus plexippus*	IILEPP2010			G5	S3	
52	northern goshawk *Accipiter gentilis*	ABNKC12060			G5	S3	SC
53	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
54	pallid bat *Antrozous pallidus*	AMACC10010			G5	S3	SC
55	perennial goldfields *Lasthenia californica ssp. macrantha*	PDAST5L0C5			G3T2	S2.2	1B.2
56	pink salmon *Oncorhynchus gorbuscha*	AFCHA02010			G5	S1	SC
57	pink sand-verbena *Abronia umbellata ssp. breviflora*	PDNYC010N2			G4G5T2	S2.1	1B.1
58	purple-stemmed checkerbloom *Sidalcea malviflora ssp. purpurea*	PDMAL110FL			G5T2	S2.2	1B.2
59	pygmy cypress *Callitropsis pygmaea*	PGCUP04032			G2	S2	1B.2
60	rhinoceros auklet *Cerorhinca monocerata*	ABNNN11010			G5	S3	
61	running-pine *Lycopodium clavatum*	PPLYC01080			G5	S4.1	4.1
62	short-leaved evax *Hesperevax sparsiflora var. brevifolia*	PDASTE5011			G4T2T3	S2S3	1B.2
63	supple daisy *Erigeron supplex*	PDAST3M3Z0			G1	S1.1	1B.2
64	swamp harebell *Campanula californica*	PDCAM02060			G3	S3	1B.2
65	thin-lobed horkelia *Horkelia tenuiloba*	PDROS0W0E0			G2	S2.2	1B.2
66	tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered		G3	S2S3	SC
67	tufted puffin *Fratercula cirrhata*	ABNNN12010			G5	S2	SC
68	western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
69	white-flowered rein orchid *Piperia candida*	PMORC1X050			G3	S3.2	1B.2
70	woolly-headed gilia *Gilia capitata ssp. tomentosa*	PDPLM040B9			G5T1	S1.1	1B.1

Exhibit A

Hollow Tree Creek Hatchery Fish Passage Improvement Project

Statement of Work

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Improve fish passage for Chinook and coho salmon and steelhead trout in Hollow Tree Creek, tributary to South Fork Eel River, tributary to Eel River, in Mendocino County. The objective is to improve access to approximately 47 miles of habitat, to increase accessible spawning habitat for adult salmonids and rearing habitat for juvenile salmonids.

2. Conduct work on Hollow Tree Creek at the former location of the Hollow Tree Creek Fish Hatchery. The project is located in Township 23N, Range 17W, Mount Diablo Meridian, Section 28 of the Hales Grove 7.5 Minute U.S.G.S. Quadrangle, 39.8169668^0 N and 123.7538226^0 W, as depicted in Exhibit B, Project Location Map, which is attached and made part of this agreement by this reference.

3. Improve fish passage in Hollow Tree Creek by removing a 60-foot concrete sill. This project includes completing the following work:
   - Conduct pre-project surveys including longitudinal profile and cross sections upstream and downstream of the sill;
   - Implement plans for fish removal, water diversion and sediment control;
   - Remove existing fish ladder and associated pieces of ladder structure;
   - Break apart and remove the concrete sill from the stream channel leaving approximately 5’ of concrete sill in place along both banks ;
   - Utilize concrete from sill to fill voids in structures on both banks as necessary;
   - If gaps exist between remaining concrete and bedrock, forms will be constructed and concrete will be poured and reinforced with rebar to maintain the structural integrity;
   - Grade and rock the access road as appropriate;
   - Any disturbed soils with the potential for sediment delivery will be seeded, mulched and planted with native plants.
   - Conduct post-project surveys including a longitudinal profile and a repeat of the pre-project cross sections the summer after the project is completed.

4. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.

5. The Grantee shall notify the Grant Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will

implement the following measures to minimize harm and mortality to listed salmonids:

- Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
- The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
- All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
- The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.

6. The project will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for fish passage as described in the Third Edition, Volume II, Part IX, February 2003, of the *California Salmonid Stream Habitat Restoration Manual*. Designs shall be visually reviewed and authorized by NOAA Fisheries (or DFG) engineers prior to commencement of work.

7. All habitat improvements will be in accordance with techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*.

8. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game. Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings. The standard for success is 80% survival of plantings or 80% ground cover for broadcast planting of seed, after a period of three years.

9. If the project will not be completed by March 31, 2010, and therefore the grantee will be requesting an amendment for time, this request and a justification for the delay resulting in the time request must also be submitted no later than December 1, 2009.

10. An annual report will be submitted each year, no later than November 15, detailing the work completed that season. The annual report will include, but not necessarily be limited to the following where applicable:

    - implementation start and end dates
    - percentage of the project completed to date

- dewatering and fish relocation data on DFG data sheet (to be provided by the DFG grant manager upon request)
- projected start and end dates for work to be implemented the following season.

The annual report will also include, on a site by site basis:

- description of instream treatment;
- site location referenced to an established landmark and latitude and longitude;
- any modifications to site/treatment design;
- length of stream habitat made accessible by fish passage treatment
- spoils volumes
- number of streambank sites treated
- length of streambank protected or stabilized
- area of feature installed within bankfull width
- length of aquatic habitat disturbed during construction;
- number of trees planted
- area treated with planting.

11. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, Microsoft Word compatible, copy on a CD. The report shall include, but not necessarily be limited to the following information:
    - Grant number
    - Project name
    - Geographic area (e.g., watershed name)
    - Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
    - Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
    - Project start and end dates and the number of person hours expended
    - Total of each fund source, by line item, expended to complete the project, breaking down grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
    - Expected benefits to anadromous salmonids from the project
    - Labeled before and after photographs of any restoration activities and techniques
    - Specific project access using public and private roads and trails, with landowner name and address
    - Complete as built project description
    - Pre- and post project longitudinal profile and cross-section data and a description of the channel changes after the barrier removal.
    - Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HB) (Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
    - Design spec achieved
    - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Fish Passage Improvement Projects (HB):

- Miles of stream treated.
- Number of barriers other than culverts treated for fish passage.
- Type of barrier treated, select from: diversion dam; push-up dam; wood or concrete dam; weir; logs; or debris.
- Miles of stream made more accessible by removing barriers other than culverts.

Instream Habitat Projects (HI, HS)

- Description of instream treatments used, including site locations referenced to an established landmark, number of treatment sites, and any modifications to site/treatment design.
- Type of materials used for channel structure placement, select from: individual logs (unanchored); logs fastened together (logjam); rocks/boulders (unanchored); rocks/boulders (fastened or anchored); stumps with roots attached (root wads); weirs; gabions; deflectors/barbs; or other engineered structures
- Miles of stream treated with channel structure placement
- Number of instream pools created by structure placement
- Number of structures placed in channel.

Upland Habitat Projects (HU)

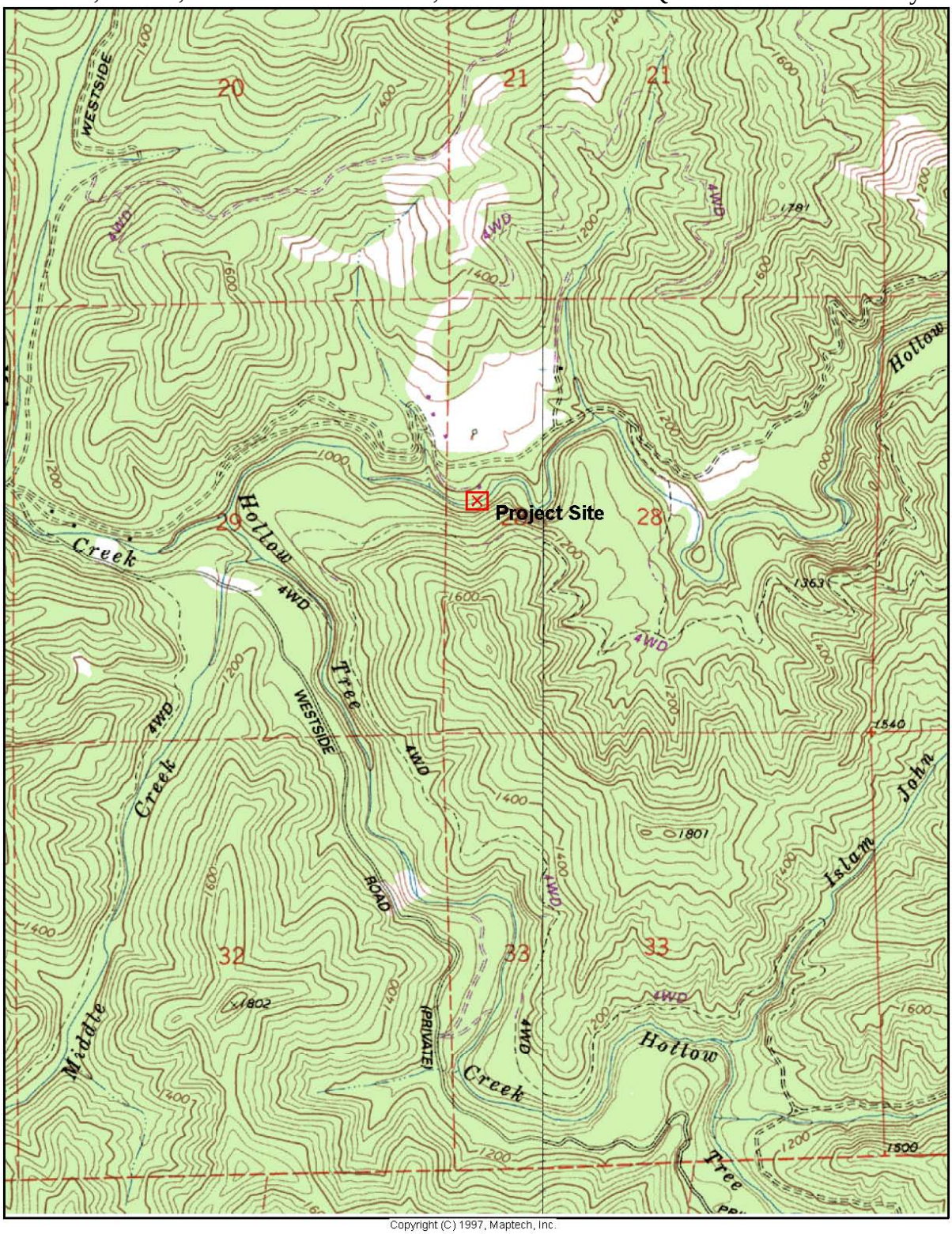
- Number of actions (road decommission / upgrade)
- Total acres of upslope area treated.
- Total miles of road treated.
- Miles of road treated for road drainage system improvements.
- Miles of road decommissioned.
- Number of cubic yards of sediment saved from entering the stream.

Riparian Habitat Projects (HR)

- Miles of stream treated overall, count stream reach only once.
- Miles of riparian stream bank treated, measure both sides of the bank.
- Total acres of riparian area treated.
- Acres of riparian area planted.
- Species scientific names of plants planted.

12. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Hollow Tree Creek Hatchery Fish Passage Improvement Project.

Exhibit B
Hollow Tree Creek Hatchery Fish Passage Improvement Project
Project Location Map
T 23N, R 17W, Mount Diablo Meridian, S 28 – Hales Grove Quad - Mendocino County



California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
Possible Species within the Hales Grove and Surrounding Quads for:
Hollow Tree Creek Hatchery Fish Passage Improvement Project
T 23N, R 17W, Mount Diablo Meridian, S 28 - Mendocino County

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Blasdale's bent grass *Agrostis blasdalei*	PMPOA04060			G2	S2.2	1B.2
2	California floater *Anodonta californiensis*	IMBIV04020			G3Q	S2?	
3	Cooper's hawk *Accipiter cooperii*	ABNKC12040			G5	S3	
4	Humboldt milk-vetch *Astragalus agnicidus*	PDFAB0F080		Endangered	G2	S2.1	1B.1
5	Kellogg's buckwheat *Eriogonum kelloggii*	PDPGN083A0	Candidate	Endangered	G1	S1.2	1B.2
6	Mcdonald's rock-cress *Arabis macdonaldiana*	PDBRA06150	Endangered	Endangered	G2	S2.1	1B.1
7	Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0			G2	S2.2	1B.2
8	Mendocino gentian *Gentiana setigera*	PDGEN060S0			G2	S1	1B.2
9	North Central Coast Fall-Run Steelhead Stream	CARA2631CA			G?	SNR	
10	Northern Interior Cypress Forest	CTT83220CA			G2	S2.2	
11	Oregon coast paintbrush *Castilleja affinis ssp. litoralis*	PDSCR0D012			G4G5T4	S2.2	2.2
12	Oregon goldthread *Coptis laciniata*	PDRAN0A020			G4G5	S2.2	2.2
13	Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6			G5T3T4	S2.2?	1B.2
14	Pacific tailed frog *Ascaphus truei*	AAABA01010			G4	S2S3	SC
15	Point Reyes horkelia *Horkelia marinensis*	PDROS0W0B0			G2	S2.2	1B.2
16	Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	PDERI041G2			G3T2?	S2?	1B.1
17	Red Mountain catchfly *Silene campanulata ssp. campanulata*	PDCAR0U0A2		Endangered	G5T3Q	S3.2	4.2
18	Red Mountain stonecrop *Sedum eastwoodiae*	PDCRA0A1S0	Candidate		G1	S1.2	1B.2
19	Sonoma canescent manzanita *Arctostaphylos canescens ssp. sonomensis*	PDERI04066			G3G4T2	S2.1	1B.2
20	Sonoma tree vole *Arborimus pomo*	AMAFF23030			G3	S3	SC
21	Upland Douglas Fir Forest	CTT82420CA			G4	S3.1	
22	Whitney's farewell-to-spring *Clarkia amoena ssp. whitneyi*	PDONA05025			G5T2	S2.1	1B.1
23	coast fawn lily *Erythronium revolutum*	PMLIL0U0F0			G4	S3	2.2

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24	coho salmon - central California coast ESU *Oncorhynchus kisutch*	AFCHA02034	Endangered	Endangered	G4	S2?	
25	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
26	leafy reed grass *Calamagrostis foliosa*	PMPOA170C0		Rare	G3	S3.2	4.2
27	leafy-stemmed mitrewort *Mitella caulescens*	PDSAX0N020			G5	S4.2	4.2
28	long-beard lichen *Usnea longissima*	NLLEC5P420			G4	S4.2	
29	maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0			G3G4	S3S4.2	4.2
30	marbled murrelet *Brachyramphus marmoratus*	ABNNN06010	Threatened	Endangered	G3G4	S1	
31	northern goshawk *Accipiter gentilis*	ABNKC12060			G5	S3	SC
32	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
33	oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080			G5	S2.3	2.3
34	pink sand-verbena *Abronia umbellata ssp. breviflora*	PDNYC010N2			G4G5T2	S2.1	1B.1
35	robust false lupine *Thermopsis robusta*	PDFAB3Z0D0			G2Q	S2.2	1B.2
36	robust monardella *Monardella villosa ssp. globosa*	PDLAM180P7			G5T2	S2.2	1B.2
37	southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020			G3G4	S2S3	SC
38	summer-run steelhead trout *Oncorhynchus mykiss irideus*	AFCHA0213B			G5T4Q	S2	SC
39	western pearlshell *Margaritifera falcata*	IMBIV27020			G4	S2S3?	
40	white-flowered rein orchid *Piperia candida*	PMORC1X050			G3	S3.2	1B.2